

sectional (27.5%), and diagnostic accuracy (22.1%) studies were prevalent. Only 186 articles could be classified with the study design hierarchy. The levels of technical efficacy prevailed (53%), followed by the efficacy of diagnostic accuracy (30%), and there was an association with the type of study design ( $P < .000$ ).

**Conclusions:** The sample articles were about technical resources and the diagnostic capacity of the technique, in the form of experimental laboratory and observational studies with cross-sectional designs or diagnostic accuracy. Most studies have a low power of evidence and a low level of diagnostic efficacy for clinical decision making.

### 3D RADIOTHERAPY IN THE PAROTID GLAND AND ITS DOSIMETRIC RELATIONSHIP WITH SALIVARY FLOW AND QUALITY OF LIFE

*Ana Waleska Pessôa Barros, Luiz André Nadler Lins, Ana Luíza Fassizoli Da Fonte, Raylane Farias De Albuquerque, and Igor Henrique Morais Silva,*

**Objectives:** To evaluate the dosimetric relationship between 3D radiotherapy and changes in salivary flow, xerostomia, and quality of life in patients with head and neck cancer according to the volume of the irradiated parotid gland.

**Study Design:** Twenty-three patients with cancer in the head and neck area and in need of 3D radiotherapy were followed up during radiotherapy treatment, and the parotid gland (PG) design was also performed in radiotherapy planning. Questionnaires were carried out to determine xerostomia and quality of life, and salivary flow was determined through calculations involving the collection and weighing of saliva. The numerical variables were represented by measures of central tendency and measures of dispersion.

**Results:** When associating salivary flow, the xerostomia questionnaire, and quality of life, a statistically significant difference was found ( $P < .001$ ). However, no relationship was found between dosimetry data, xerostomia, and hyposalivation.

**Conclusions:** Patients undergoing 3D radiotherapy for malignant neoplasms in the head and neck region had decreased salivary flow, increased complaints of dry mouth, and decreased quality of life; however, it was not possible to establish a statistically significant correlation between these findings and the volumes of irradiated parotids.

### IS SJOGREN SYNDROME A RISK FACTOR/ CONTRAINDICATION FOR DENTAL IMPLANTS? AN UMBRELLA REVIEW

*Ana Waleska Pessôa Barros, Pedro Henrique Da Hora Sales, Alessandra De Albuquerque Tavares Carvalho, Adriana Zarzar, Andreza Barkokebas, and Jair Carneiro Leão,*

**Objectives:** Oral rehabilitation with dental implants is an excellent alternative to recover masticatory and aesthetic function; however, it can present variable success rates in certain clinical conditions, including in Sjogren's syndrome. The aim of the present study was to determine the level of methodological quality of systematic reviews that evaluated the effectiveness of dental implants in patients diagnosed with Sjogren's syndrome.

**Study Design:** The following databases were searched: PubMed/MEDLINE, LILACS, Science Direct, and Dare Cochrane.

**Results:** 833 articles were evaluated. Based on the pre-established inclusion and exclusion criteria, at the end of the

selection process, only 4 articles were selected for inclusion in this overview. Altogether, the study sample comprised 722 implants installed in 189 patients with a 95.22% success rate. The studies were assessed for their methodological quality by the AMSTAR 2 tool, in which 3 had a critically low quality.

**Conclusions:** Oral rehabilitation with dental implants in patients with Sjogren's syndrome seems to have a high success rate; however the low quality of the studies included in this overview highlights the need for primary and secondary studies with better methodological design in order to reduce bias and provide reassurance for this clinical conduct.

### IMMUNOEXPRESSION OF STEM CELL MARKERS IN DEVELOPMENTAL ODONTOGENIC CYSTS

*Larissa Abbehusen Couto, Lorena Vieira Sacramento, Ianna De Aniz Castro, Vildeman Rodrigues De Almeida Junior Flávia Caló De Aquino Xavier, and Aguida Cristina Gomes Henriques,*

**Objectives:** Developmental odontogenic cysts (DOCs) originate from remnants of the odontogenesis, rich in multipotent stem cells (SC). The aim was to evaluate the immunoeexpression of multipotent SC markers in DOCs and to compare aggressive and indolent cysts.

**Study Design:** Immunohistochemistry using the immunoperoxidase technique was performed on 42 DOCs using monoclonal antibodies for CD44 and CD90. The sample consisted of 20 odontogenic keratocysts (OKs), 7 dentigerous cysts (DCs), 7 glandular odontogenic cysts (GOCs), 4 calcifying odontogenic cysts (COC), 2 adult gingival cysts, 1 lateral periodontal cyst, 1 botryoid odontogenic cyst, and 1 orthokeratinized odontogenic cyst.

**Results:** DOCs revealed immunopositivity in epithelium and capsule for CD44 and CD90. CD44 immunoeexpression in epithelium and capsule was superior in OK, followed by DC and GOC ( $P = .000$ ). For CD90, only the capsule showed greater expression in OK, followed by calcifying odontogenic cyst and DC ( $P = .000$ ). Aggressive cysts (OK and GOC), when compared to indolent cysts, showed superior positivity for CD44 in the epithelium ( $P = .007$ ) and for CD90 in the capsule ( $P = .006$ ).

**Conclusions:** Multipotent SC can participate in the histogenesis and pathogenesis of DOCs. This study also suggests that multipotent SC can be associated with the distinct biological behaviors of these lesions.

### EFFECT OF THREE ANTIMICROBIALS ON CHEMOTHERAPY-INDUCED ORAL MUCOSITIS: CLINICAL, HISTOLOGICAL, AND ANTIOXIDANT EVALUATION

*Dieni Da Silveira Teixeira, Valesca Sander Koth, Maria Antonia Zancanaro De Figueiredo, Karen Cherubini, and Fernanda Gonçalves Salum,*

**Objectives:** This study investigated the effect of 0.12% chlorhexidine, 10% povidone-iodine, and 50% erythromycin on oral mucositis (OM) induced by 5-fluorouracil (5-FU) in rats.

**Study Design:** Seventy-seven Wistar rats were divided into 5 groups: control, 5-FU, chlorhexidine, povidone-iodine, and erythromycin. OM was induced with 2 intraperitoneal injections of 5-FU. On the fourth day, an ulcer of 5 mm was made on the ventral tongue of animals. The animals received topical application of substances for 5 days (twice a day). On the 10th day, the animals were euthanized.

**Results:** The erythromycin group displayed the lowest severity and incidence of OM. Povidone-iodine showed the highest inflammation scores. In the histomorphometric analysis, the area of newly formed epithelium in the control was significantly greater. Among the animals that received 5-FU treatment, the erythromycin group showed the highest values for newly formed epithelial area and lowest expression levels of proinflammatory cytokines analyzed. In the antioxidant analysis, there was no significant difference between groups.

**Conclusions:** Topical erythromycin exhibited positive effects on the clinical and histopathologic status of OM induced by 5-FU in rats.

#### ANTICANCER EFFECTS OF DIFFERENT FATTY ACID SYNTHASE INHIBITORS ON ORAL CANCER

*Iara Gonçalves Aquino, Willian Peter Boelcke, Isadora Ferrari Teixeira, Amanda Mazzaro, Florence Juana Maria Cuadra-Zelaya, Edgard Graner, and Débora Campanella Bastos,*

**Objectives:** Overexpression of fatty acid synthase (FASN) is associated with aggressiveness, poor prognosis, and risk of metastasis in several human cancers, including oral squamous cell carcinomas (OSCC). Here, we compared the in vitro effects of 3 FASN inhibitors on malignant phenotypes of the OSCC cell line SCC-9.

**Study Design:** SCC-9 cells were treated with C75, triclosan (TCS), and orlistat (ORL) in their respective IC12.5, IC25, and IC50. We analyzed proliferation using MTT (3-[4,5-dimethylthiazol-2-yl]-2,5 diphenyl tetrazolium bromide) assay, cell cycle, and apoptosis by flow cytometry. Cell migration and invasion were evaluated by transwell inserts and adhesion using type I collagen or fibronectin.

**Results:** C75 showed the lowest IC50, whereas ORL presented the highest IC50. Each drug promoted distinct morphologic changes in SCC-9 cells and was able to significantly reduce FASN activity. All drugs promoted cell cycle arrest in G0/G1 and induced apoptosis at IC50. C75 reduced cell migration and invasion and increased the adhesion of SCC-9 cells. TCS reduced adhesion, migration, and invasion of SCC-9 cells. ORL reduced cell migration but did not significantly modify the adhesion and invasion of SCC-9 cells.

**Conclusions:** FASN inhibitors affected significant steps of tumor progression, and TCS showed better anticancer effects on SCC-9 cells.

#### ISOLATION AND CHARACTERIZATION OF CANCER STEM CELL SUBPOPULATIONS IN ORAL SQUAMOUS CELL CARCINOMA

*Iara Gonçalves Aquino, Florence Juana Maria Cuadra-Zelaya, Ana Laura Valença Bizeli, Isadora Ferrari Teixeira, Ricardo Della Coletta, Débora Campanella Bastos, and Edgard Graner,*

**Objectives:** Cancer stem cells (CSCs) comprise a subpopulation of tumor cells associated with initiation, progression, and chemoresistance. We identified, isolated, and characterized subpopulations of CSC in SCC-9 ZsGreen (SCC-9 ZsG) and LN1-A cell lines derived from oral squamous cell carcinoma (OSCC).

**Study Design:** SCC-9 ZsG and LN-1A subpopulations were identified and isolated with antibodies against CD44 and CD326 by flow cytometry. Cell morphology, proliferation,

migration, clonogenic assay, and protein expression associated with epithelial-mesenchymal transition were carried out.

**Results:** Six and 7 phenotypes were isolated in SCC-9 ZsG and LN-1A cells in relation to its differential expression, respectively. CD44-low/CD326+ subpopulations showed epithelial phenotype with polygonal morphology and high expression of E-cadherin, whereas CD44+/CD326- showed a fusiform morphology with a high expression of vimentin, N-cadherin, and Slug, suggesting a mesenchymal phenotype. CD44-high/CD326- subpopulations were exclusively identified and isolated in LN-1A cells, also presenting a mesenchymal phenotype. Proliferation, migration, and colony formation were increased in CD44+/CD326- compared to CD44-low/CD326+ and parental cells in SCC-9 ZsG.

**Conclusions:** Our preliminary results showed that CD44-high/CD326- cells were correlated to a more malignant phenotype. Further experiments will be needed to better characterize the populations of CSC in OSCC.

#### PREVALENCE OF ORAL MANIFESTATIONS AND METHODOLOGICAL CHARACTERISTICS OF STUDIES WITH HIV INDIVIDUALS USING HAART

*Gabriel Francisco Krueger, Ernani Pereira Paz Neto, Kelda Zanchi Younan, Humberto Thomazi Gassen, and Sergio Augusto Quevedo Miguens Jr,*

**Objectives:** Analyze the methodological characteristics of publications on oral manifestations associated with human immunodeficiency virus/acquired immunodeficiency syndrome and verify the most prevalent oral manifestations and risk factors in individuals undergoing treatment with highly active antiretroviral therapy.

**Study Design:** A search for articles in the SCOPUS electronic database was carried out by a trained and calibrated reviewer to collect methodological variables and variables related to the frequency of outcomes reported in the included articles.

**Results:** The sample consisted of 62 articles originating mainly from the United States in the period between 1996 and 2020. Most articles did not report methodological data such as sample calculation (93.5%), randomization (81.5%), blinding (81.5%), and calibration of examiners (66.1%). The samples comprised participants of both sexes (80.6%), with a mean age of 30.6 years. The most prevalent lesions were hairy leukoplakia (46.8%) and pseudomembranous candidiasis (38.7%), and the risk factor was low CD4 T lymphocyte counts.

**Conclusions:** Pseudomembranous candidiasis and hairy leukoplakia are the most prevalent oral manifestations in individuals with low CD4 lymphocyte counts (less than 240 cells/mm<sup>3</sup>), but most articles are from cross-sectional studies that do not report methodological variables and may reflect on the quality of the reports.

#### CROSS-TALK OF PROTEINS RELATED TO INVADOPODIA AND THE INVASION PROCESS IN SALIVARY GLAND MUCOEPIDERMAL CARCINOMA

*Thaiana Lima De Oliveira, Felipe José Almeida Loureiro, Karolynny Martins Balbinot, Maria Sueli Da Silva Kataoka, Sergio De Melo Alves Junior and João De Jesus Viana Pinheiro,*

**Objectives:** To evaluate the immunoexpression of Tks4, Tks5, cortactin, and MT1-